UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

SCANSOFT, INC.,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 04-10353-PBS

SCANSOFT, INC.,

        Plaintiff,

        v.

        C.A. No. 04-10353-PBS

VOICE SIGNAL TECHNOLOGIES, INC.,
LAURENCE S. GILLICK, ROBERT S.
ROTH, JONATHAN P. YAMRON, and
MANFRED G. GRABHERR,

        Defendants.

**MEMORANDUM IN OPPOSITION TO SCANSOFT'S MOTION TO ALLOW
INSPECTION OF ALL COMPUTERS AND COMPUTER SERVERS IN THE
POSSESSION, CUSTODY OR CONTROL OF VST OR THE INDIVIDUAL
DEFENDANTS AND TO COMPEL VST TO PROVIDE INFORMATION NECESSARY
FOR THE NEUTRAL EXPERT PROCEDURE**

Voice Signal Technologies, Inc. ("Voice Signal") submits its Opposition to ScanSoft's

Motion to Allow Inspection of All Computers and Computer Servers in the Possession, Custody

or Control of VST or the Individual Defendants, and to Compel VST to Provide Information

Necessary for the Neutral Expert Procedure ("ScanSoft's Motion").

ScanSoft has wasted this Court's time in filing a motion for extraordinary relief without

an adequate opportunity to conference the issues raised in this Motion. Had ScanSoft asked, it

would have learned that Voice Signal has already produced all of the materials in its possession

requested in ScanSoft's Motion. To date, Voice Signal has produced over seven thousand pages

of documents and over 4 million lines of source code. The documents and source code include

design and planning documents, training tools and code, test scripts and log files, among other things. ScanSoft's actions are contrary to the spirit and purpose of Rule 37 and Local Rules 7.1 and 37.1, especially in light of the extreme relief it has requested.

Voice Signal is a small company. Today it employs fewer than 100 employees. In 2001, when the events relevant to this case are alleged to have taken place, it employed less than 40 people, including the four individual defendants. It did not have the elaborate documentation procedures ScanSoft suggests must have existed. Rather, a small group of scientists worked together in close quarters on the development of what became Voice Signal's mobile phone voice recognition products.

As this Court well knows, Voice Signal has resisted producing its source code in this litigation. However, Voice Signal has fully complied with this Court's orders concerning discovery and the Neutral Expert Procedure, including the Court's orders requiring Voice Signal to produce its source code and other documents to the Neutral Expert. Voice Signal cannot produce what it does not have. ScanSoft's Motion to inspect Voice Signal's computer hard drives and servers should be denied.

I.   ScanSoft Failed Adequately to Confer

ScanSoft failed to afford Voice Signal an adequate opportunity to *truly* confer regarding the issues raised in its Motion. Had the parties conferred on the specific issues raised in the Motion, it would not have been filed.

ScanSoft's counsel first raised five of the six categories of documents it demands in its Motion on May 2, as part of a call from ScanSoft's counsel to Voice Signal's counsel to ascertain whether Voice Signal would assent to ScanSoft's Motion to file documents under seal. *See* Declaration of Wendy Plotkin, filed herewith, ¶2 ("Plotkin Decl."). ScanSoft's counsel

stated that ScanSoft would be filing a Motion seeking an inspection of Voice Signal's computer

hard drives and servers. Plotkin Decl. ¶2. ScanSoft briefly identified the categories of

documents that it asserted were not produced. Plotkin Decl. ¶4. In response, Voice Signal

informed ScanSoft that it did not think ScanSoft had adequately complied with the Rule 37

conference on the issues raised in its Motion. Plotkin Decl. ¶5. Nevertheless, ScanSoft filed its

Motion that same day.

A true meet and confer would have made a difference and should have significantly

narrowed the issues before the Court. As set forth below, Voice Signal has already produced the

materials that ScanSoft has sought in ScanSoft's Motion. An adequate conference, in which

Voice Signal's counsel would have pointed ScanSoft's counsel to the files from the production

that contain the information requested, might have prevented this Motion altogether.

II.   Voice Signal Has Produced All of Information Raised in ScanSoft's Motion That is In Its Possession

Most of the materials ScanSoft seeks through this Motion are kept by Voice Signal in its

source code version control system and can be found in the files contained on the laptop

computer produced by Voice Signal on January 27, 2006 and supplemented on March 17, 2006

in accordance with this Court's March 15 Order. Voice Signal has produced over 4 million lines

of source code and comments and has produced more than 15,000 lines of what are called

"make" files, which describe how the recognizers were to be built and compiled. See

Declaration of Don McAllaster filed herewith ("McAllaster Decl."), ¶ 13. In light of Voice

Signal's complete disclosure, there is no basis to consider the extreme relief it seeks. Voice

Signal addresses each of the specific categories of documents below.

A.   VSuite and VoiceMode Source Code

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ScanSoft asserts that Voice Signal has not produced any code relating to its VSuite and VoiceMode products. This is both misleading and untrue. First, as ScanSoft knows, VSuite and VoiceMode are not software programs. They are marketing names for products that have several components, including a recognizer. The VSuite product was not used in a cellular phone until late 2003 and the VoiceMode product was not used in a cellular phone until March, 2005. McAllaster Decl. ¶ 5. Voice Signal produced First Year Source Code related to every recognizer on which work was performed (by anyone in the company) during the first year period. The names of those recognizers are ELVIS (two versions), Voice Tag, CCR, Microrec, Large Vocabulary, and Small Vocabulary. McAllaster Decl. *Id.* The VoiceMode product utilizes a recognizer that has evolved from the ELVIS recognizer. *Id.* The earlier version VSuite products utilize the Voice Tag and CCR recognizers, and the later versions of VSuite use ELVIS. *Id.* Voice Signal has produced First Year Source Code relating to the recognizers that were later incorporated in the VoiceMode and VSuite products, in full compliance with the Neutral Expert Procedure.

B.   Design Documents

ScanSoft complains that Voice Signal has failed to produce any design and development documents. Its expert, Dr. Goldhor, claims such documents are "typically created" during the software development process. (ScanSoft Mot. at 8). Voice Signal's First Year Source Code production included a substantial amount of information concerning the design and development of the software, including more than 190 design and planning documents. McAllaster Decl. ¶ 8.

For example, Voice Signal has produced 53 planning and design documents concerning the older version of ELVIS (*see* /depot/research/lvr/design/*/*.html), 18 documents detailing data collection (*see* /depot/research/datacollection/docs/*/*.doc), 71 documents concerning the

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new version of ELVIS design and plans (*see* /research/lvr/design/*/*.html)[1], 7 documents about

coding conventions in the new ELVIS (*see* /research/lvr/conventions/*.html). Voice Signal also

produced additional design documents concerning language modeling from the files of Jonathan

Yamron that can be found in ../jyamron/misc/tools.txt, ../jyamron/misc/ideas.txt,

../jyamron/cluster/cluster.txt. Voice Signal also produced 1894 ".h header" files, which describe

the various "APIs" or Application Program Interfaces for Voice Signal's recognizers.

C.   Testing Plans and Analyses of Test Results

ScanSoft tells the Court that Voice Signal has not produced documents relating to testing

plans and testing results for Voice Signal's software.[2] Voice Signal has produced all the

documents in its possession concerning testing. Voice Signal did not have a formal testing plan

or any testing benchmarks in place during the time period in question. However, Voice Signal

has produced what documents it has, including a large volume of source code which constitutes

testing parameters and results for the development of its speech recognizers.

Voice Signal produced approximately 45 recognizer log files and test scripts, totaling

more than 300,000 lines of output. These files are part of the source tree regression testing[3]

performed by Voice Signal. These files can principally be found in /research/lvr/*/*.log,

/depot/research/lvr/test/regressiontest/2experiment/reference/*.log. McAllaster Decl. ¶ 9.

D.   Training Tools

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[1]   It is likely that these are the documents referenced in the e-mail attached to ScanSoft's Motion as Ex. 5.

[2]   None of the individual defendants had any significant involvement in the testing of the software as it developed, so it is unlikely that there would be many First Year documents that discussed in any detail Voice Signal's testing efforts.

[3]   Regression testing is a software engineering technique for ensuring that features that worked in earlier versions of the code continue to work in later versions of the code (i.e. test that features do not "regress" to a non-functional state).

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ScanSoft further complains that Voice Signal did not produce documents concerning training tools that it used to produce acoustic and language models. Voice Signal did produce such training tools material in its source code production.

As ScanSoft knows, Voice Signal used the Cambridge University HTK acoustic training tools in building its acoustic models. This tool kit is publicly available, but Voice Signal's license does not authorize Voice Signal to produce the complete tool kit to ScanSoft. McAllaster Decl. ¶ 6. Voice Signal provided ScanSoft with instructions for obtaining the code for the complete HTK acoustic training tools in a "README" file on the fifth CD it produced. In addition, all of VST's changes and enhancements to the HTK tool kit during the first year period were produced to ScanSoft and are in the /am/src/htk file, with instructions on how to apply these changes and enhancements in /am/src/htk/README. McAllaster Decl. ¶ 10. Finally, Voice Signal also produced over 23,000 scripts[4] which used HTK to produce and/or test acoustic models. These can be found on CD number 5 in the "am" directory.[5]

Voice Signal also produced language model training code and tools. At the time period in question, Voice Signal was not offering a product for which it needed a sophisticated language model. Voice Signal was focused on recognizers for voice dialing and digit dialing, neither of which required a large vocabulary to be effective. As ScanSoft knows, Voice Signal's language models were trained using the freely available CMU/Cambridge Statistical Language Modeling toolkit. The CMU/Cambridge tool kit was sufficient to meet the needs of Voice Signal's recognizers in development. An example of the language model training using the

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[4]   A "script" is a set of commands or instructions to perform a specific function or to automate certain application tasks. It is written in an interpreted language that is directly executed by another program that understands the language instead of the computer's processor.
[5]   These are the "perl", "python", and "shell" scripts in the am directory hierarchy. In addition, many of the scripts are named "train.pl". *Id.*.

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CMU/Cambridge tool kit can be found on CD number 1 in /depot/main/LargeVocab/source/languageModel/email/email.01_05_2001.2gram.ctff10.arpa. Later, Voice Signal began to develop its own tools for building language models. The code that had been developed in the first year can be found in the source code production for Jonathan Yamron. McAllaster Decl. ¶ 11.

E.   Data Files

Finally, ScanSoft claims it is entitled to the "data files necessary for the operation of the ELVIS recognizer." (ScanSoft Mot. at 3). It appears that ScanSoft is referring to two types of data files in its Motion. First, when it states "data files necessary for the operation of the ELVIS recognizer", it is referring to acoustic and language models, which Voice Signal has produced. Voice Signal has produced more than a dozen acoustic models, as well as several language models and lexicon ("vocabulary files") combinations.[6] McAllaster Decl.¶ 12.

The second type of "data file" to which ScanSoft refers is model training data. For acoustic modeling, these are recordings and transcriptions of actual speech. This is raw data that is used by acoustic modeling tools like HTK to produce acoustic models. *Id.* For language model training, "data files" are text (such as text from the New York Times). These text data files are then used to build language models. *Id.*

ScanSoft has never before requested that Voice Signal produce data files. The data files do not constitute source code and would not fall within the definition of source code provided by the Court. These files are extremely voluminous and offer no insight as to how the recognizer works. Further, many of the data files that Voice Signal used in the development of its software

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[6] These can be found on CD numbers 3 and 1, in /research.lvr/data/*/*.amf, /research/lvr/data/*trees, /research/lvr/data/*/*trees (new acoustic model format), /research/lvr/data/*/*.dmap, research/lvr/data/*/*.smap (older acoustic model format), /research/lvr/data/lm/interp/*/*.lm, /depot/main/LargeVocab/source/langugaeModel/email/*, /research/lvr/data/*/*voc (language models and lexica in various formats). McAllaster Decl. ¶12.

are proprietary to a third party, such as data files purchased from the New York Times, and

cannot be produced by Voice Signal. *Id.* It is unlikely that the Neutral Expert would want or

have any use for these types of data files that ScanSoft seems to be requesting, for the first time,

in its Motion.

III.   Voice Signal Has Produced All the "First Year" Documents That Exist

Contrary to ScanSoft's assertions, Voice Signal has cooperated and complied with this

Court's Neutral Expert procedure, and has produced over four million lines of source code to

ScanSoft and the Neutral Expert and all of the other First Year Documents that were in its

possession at the time this suit was brought. As is set forth in the Declaration of Don

McAllaster, Voice Signal maintains its source code using a version control system known as

"Perforce." McAllaster Decl. ¶ 5. Voice Signal painstakingly captured the source code from the

first year period using both the Perforce system and collecting source code directly from the

computers of the individual defendants who did not use the Perforce system. McAllaster Decl.

¶¶ 4-5.

ScanSoft makes the accusation – without any evidence – that Voice Signal is non-

compliant.   Based on nothing, ScanSoft asks this Court to go to extreme measures and allow

ScanSoft to rifle through Voice Signal's computer hard drives and servers. While Voice Signal

has consistently and aggressively protected its highly confidential and proprietary materials in

this litigation, it has played by the discovery rules and the Neutral Expert Procedure.

Voice Signal has made a thorough search and produced all e-mails, other documents and

source code in its possession that are responsive to its discovery obligations and this Court's

orders. In fact, as detailed above, Voice Signal has produced the categories of development

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documents, training models, etc. to which ScanSoft point as "evidence" that Voice Signal's

production is incomplete. With respect to e-mails in its possession (including the e-mail

collected in connection with the State Court lawsuit filed by Lernout & Hauspie in September,

2001).

There is no basis for further inspection and certainly no basis for an order permitting a

"third party forensic expert procedure" of the type requested by ScanSoft. *See Williams v. Mass.*

Mutual Life Ins. Co., 226 F.R.D. 144, 146 (D. Mass. 2005) (declining request for forensic

inspection where (1) producing party has conducted a search and sworn to its accuracy; and (2)

the moving party has not presented evidence that producing party's representations are

misleading or substantively inaccurate); *Cognex Corp. v. Electro Scientific Indus. Inc.*, 2002 WL

3230941, *4-5 (D. Mass. 2002) (declining request by plaintiff to conduct forensic inspection of

defendant's back-up computer tapes *at plaintiff's expense*, where (1) defendant had conducted an

extensive search; and (2) there was no evidence that defendants had destroyed documents after

receipt of a document request). ScanSoft's request should be denied.

A. ScanSoft's Accusations Concerning the Individual Defendants are Inaccurate and Without Merit.

In its Motion, ScanSoft makes two unsupported allegations concerning the individual

defendants that must be corrected. ScanSoft makes these allegations in an attempt to convince

the Court that there are additional e-mails that must exist that Voice Signal is not producing.

This is simply not true.

First, ScanSoft alleges that Jonathan Yamron had involvement with Voice Signal before

he resigned from L&H. ScanSoft's Motion at 6-7. ScanSoft points to an e-mail dated February

15, 2001 from Jonathan Yamron to Sveva Besana, another Voice Signal employee and states,

without support, that Dr. Yamron began his employment at Voice Signal on February 19, 2001.

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Dr. Yamron's first day of work with Voice Signal was Monday, February 12, 2001.   When he wrote the e-mail cited by ScanSoft, he was an employee of Voice Signal.

Second, ScanSoft asserts that Voice Signal communicated with Larry Gillick during the injunction period in the L&H case and makes the outrageous and completely unsupported claim that Dr. Gillick and Voice Signal violated a court-ordered injunction. ScanSoft cites e-mails copied to a distribution list of individuals, including Dr. Gillick.   There is no evidence that Dr. Gillick received, reviewed or responded to any of these e-mails. In fact, the individual defendants who were subject to the injunction had no access to the Voice Signal e-mail system or their e-mail accounts during the injunction period. Declaration of Larry Gillick, filed herewith, at ¶ 3.

B. Voice Signal has produced all e-mails in its possession.

ScanSoft complains that Voice Signal has produced what it considers a small volume of e-mails from the individual defendants in the first year. It suggests that Voice Signal is withholding documents. While the volume may be relatively small, Voice Signal has produced all of the e-mails in its possession from the First Year time period.

The relatively small volume of e-mails can be attributed to several factors. First, there were not many e-mails to start with. In 2001 and early 2002, Voice Signal was a small company with relatively few employees. The company was housed in a modest space where employees were seated next to each other in cubicles. In these circumstances, employees generally talked to each other directly to discuss programming issues and ideas. They did not need to communicate by e-mail when they were sitting in the same room. Second, the company was in "start up" mode, when things needed to be done quickly and formal procedures were not established. Third, ScanSoft brought this action in February 2004 alleging wrongdoing dating back to early

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2001. ScanSoft takes the risk, having waited so long, that documents will have been lost or discarded.[7]   Third, the individual defendants are speech scientists who were working to develop a new recognizer at a small company. They were focused on developing the recognizer, not writing lengthy documents or e-mails about it.

In short, Voice Signal has produced all First Year Documents -- including e-mails -- in its possession or in the possession of its attorneys, Choate, Hall & Stewart. Voice Signal can do no more. ScanSoft should not be allowed to search Voice Signal's computer servers and hard drives in an effort to collect documents *that do not exist.*

III.   ScanSoft's Request For VST to Provide Additional Information Concerning Its Production is Outside of the Neutral Expert Procedure

On March 30, ScanSoft's counsel, Lisa Fleming, sent an *ex parte* e-mail to the Neutral Expert asking him to pose to Voice Signal a series of questions concerning Voice Signal's source code. *See* Ex. A.[8]   Ms. Fleming had not conferred with Voice Signal's counsel in advance of sending her request. Voice Signal promptly responded to this e-mail and informed Dr. Ney that by sending it ScanSoft had failed to follow the terms of the Neutral Expert Procedure. *See* Ex. B.   ScanSoft's requests for information are outside the Neutral Expert Procedure should be denied.

As a procedural matter, ScanSoft's attempt to link these requests for additional information about Voice Signal's source code to the other issues raised in its Motion is disingenuous.   The two have nothing to do with each other. Moreover, ScanSoft's Motion

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[7]   ScanSoft argues that because of the litigation with its predecessor, Lernout & Hauspie, as initiated in 2001, Voice Signal has been on notice since that time of the claims brought in *this litigation* and therefore should not have destroyed any e-mails or other documents regarding this matter. This argument is groundless. The state court litigation between Lernout & Hauspie and Voice Signal was settled and dismissed *with prejudice* in January 2003. ScanSoft attempted to intervene in that action and its motion was denied. ScanSoft elected not to bring this case until February 2004. Any documents lost or discarded in the interim were not in the possession, custody or control of Voice Signal when ScanSoft brought this action.

[8] All Exhibits referred to herein are attached to the Declaration of Wendy S. Plotkin.

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should not be described as a "Motion to Compel," because the information it seeks has never

been the subject of a discovery request.   Dr. Ney did not agree with ScanSoft's suggestion that

the information it requested would be helpful to his analysis, and consequently denied ScanSoft's

request. Left with no other recourse, ScanSoft improperly appended this issue to its Motion to

Compel.

ScanSoft's e-mail further requests that Voice Signal provide additional, detailed "road

map" type explanatory information concerning its source code. [9] At the conclusion of the March

24, 2006 meeting with the Neutral Expert, Dr. Ney asked that ScanSoft provide a supplemental

submission to him which identified the locations in Voice Signal's source code where ScanSoft

believes that Voice Signal was practicing the asserted trade secrets. In turn, he asked Voice

Signal to make a submission that identified the areas of its source code where it practiced the

functions that were identified by ScanSoft as containing its alleged trade secrets. ScanSoft's

March 30 e-mail was a blatant attempt to circumvent the procedure to which the parties and the

Neutral Expert had agreed for the exchange of additional submissions to the Neutral Expert. In

fact, ScanSoft had asked for the same relief at the March 24 meeting and had been denied.

ScanSoft's designated counsel asked whether Voice Signal would be required to provide the road

map before ScanSoft would be required to further particularize its trade secrets. The Neutral

Expert said no:

> Mr. Lawrence: One thing I wanted to clarify on this procedure, the identification of the
> three areas – Professor Ney is referring to them as three concepts in every single
> recognizer -- the identification of that in the VST Code from VST, that comes first, then
> we responded with where we think it is?

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[9]   Curiously, in its e-mail ScanSoft also asked that Voice Signal "provide the C++ structure or class element names, database field names, or similar identifying information for all [information requested]. Please indicate the name of each C++ structure or class element in which such information resides during recognition." Voice Signal's recognition code is written in the C language, not C++ therefore ScanSoft's request is of no relevance to this dispute.

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Professor Ney responded:

Dr. Ney: *No, No;* my suggestion was in parallel. It was two questions. A question to ScanSoft is, "Where do you think, or what are the parts of the code that are in contradiction with these trade secrets?" And the question to VST is, "Show me those parts of your code where you perform these three functions."

Tr. 158-159.

Clearly unhappy with this response, ScanSoft again, through its e-mail (and this Motion), is attempting to shift its own burden to identify its trade secrets and to identify where, in the Voice Signal source code, Dr. Ney might find evidence that Voice Signal has used or copied them.

It is for the Neutral Expert, not ScanSoft, to decide what information would be helpful for his analysis. Voice Signal has provided to the Neutral Expert all of the information that *he* has requested concerning its source code. Voice Signal has also provided the information to ScanSoft's designated counsel.[10] Therefore, Voice Signal has already provided the bulk of the information requested by ScanSoft. ScanSoft's attempt to evade the Neutral Expert Procedure should be denied by this Court.

CONCLUSION

For the foregoing reasons, Scansoft's Motion to Allow Inspection of All Computers and Computer Servers in the Possession, Custody or Control of the Individual Defendants to Compel VST to Provide Information Necessary for the Neutral Expert Procedure should be denied.

Respectfully submitted,

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[10]   On telephone conferences with Dr. Ney, Voice Signal has stated that its designated counsel would be available and willing to answer any questions from Mr. Lawrence concerning where and how to find things in the Voice Signal source code. ScanSoft's counsel has only called Voice Signal's counsel twice, for the purposes of discussing the materials produced by Voice Signal to ScanSoft and Dr. Ney in response to Dr. Ney's request.

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By its attorneys,

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